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## AMPHIBIANS AND REPTILES OF THE HOPKINS-BRANNER EXPEDITION TO BRAZIL

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The herpetological collections made by the Hopkins-Branner Expedition to Brazil in 1911 were purchased by the California Academy of Sciences, where they have since been stored. On the return of the senior author from the Marshall Field Brazilian Expedition in 1926, Mr. J. R. Slevin, of the California Academy of Sciences, wrote concerning the existence of this collection; and, after some delays, application was made for the loan of this material, which comes in large part from northeastern Brazil, a region of special interest for its faunal relations with Paraguay and Matto Grosso. We are much indebted to Mr. Slevin for his interest and trouble in arranging for the study of this collection. The only specimens that have been recorded from it are the *Cnemidophorus ocellifer*, reported upon by Charles E. Burt in his review of the genus (1931), and the *amphisbaenas*, reported in a separate paper (Schmidt, 1936). The further twenty-four year delay in the preparation of the present report results mainly from the failure of the plans for continued studies in Brazilian herpetology and mammalogy formulated by the senior author and Colin Campbell Sanborn on their return from Brazil in 1926 and 1927, which have failed of execution through causes beyond their control.

The personnel of the Hopkins-Branner Expedition consisted of Dr. Harold Heath, of Stanford University; Dr. Fred Baker, of Point Loma, California; and Dr. William M. Mann, now Director of the

United States National Zoological Garden. Their collecting stations in northeastern Brazil are shown on the accompanying map. Drs. Baker and Mann made a separate trip up the Amazon and Madeira to the Bolivian border, and their collections from this region are included in the present report. We have included notes on and comparisons with specimens of various species in the Brazilian collections of Chicago Natural History Museum.

The importance of this collection lies in its great amplification of our knowledge of the fauna associated with the chain of savannas extending from the Paraguayan Chaco and Matto Grosso to Ceará and Pernambuco—a fauna that is distinct on the one hand from the forest and mountain fauna of eastern and southeastern Brazil and on the other from that of the Amazonian forest. The senior author's attention was first drawn to the interesting connection of the fauna of the upper Paraguay with that of northeastern Brazil by his studies of the South American caimans (Schmidt, 1928, p. 224, fig. 3), in which he showed that the record of a caiman from the Parnahyba River, Piauhý, by Siebenrock is based on a specimen of *Caiman yacare*, the common species of the upper Paraguay. An even more striking clue to the faunal relation of the open country of southern South America to that of this corner of Brazil is supplied by the deduction by Mr. Colin C. Sanborn regarding the type locality of the three-banded armadillo, *Tolypeutes tricinctus* Linnaeus. He shows that it is extremely probable that this species came first from northeastern Brazil, and restricts the type locality to Pernambuco; and this conclusion is confirmed in a subsequent note (Sanborn, 1930a, p. 62, fig. 1; 1930b, p. 504). Burt's map of the distribution of *Cnemidophorus ocellifer* should have exhibited a similar distribution but by some extraordinary confusion of the records he shows the range of *C. ocellifer* as extending from Paraguay to eastern Santa Catharina (see p. 454), which misses the essential feature of the distribution of this savanna fauna. The chain of savannas is well shown in any modern phytogeographic map of South America (cf. Goode, 1943).

The species in the present collection that illustrate this faunal relation between the Paraguay-Matto Grosso region and northeastern Brazil are the following: *Bufo paracnemis*, *Hyla spegazzinii*, *Phyllomedusa hypochondrialis*, *Polychrus acutirostris*, *Philodryas nattereri*, *Cnemidophorus ocellifer*, *Xenodon merremii*, *Liophis genimaculata*. To these may be added *Caiman yacare* and numerous other amphibians and reptiles. Among mammals the large marsh deer is a conspicuous form with the savanna corridor distribution.

The ranges of South American amphibians and reptiles are usually stated in such vague terms that the correlation of the faunal arrangement with physical or vegetational features is obscure. As more and more ranges of individual species are plotted in detail, we feel sure that the savanna fauna of the central Brazilian area from the northeastern states to Matto Grosso will be found to constitute one of the most important of these correlations. It includes not only the great number of actively spreading savanna species of the present, for which this habitat is a highway of distribution, but also a number of relict forms that represent a western fauna of the east Brazilian highland, which may have been isolated as a distinct continental mass by transgressions of the sea in the Amazon and Tocantins basin.

The following is a list by states of the Brazilian localities at which collections were made (see also fig. 85):

|                             |                     |
|-----------------------------|---------------------|
| Amazonas                    | Pará                |
| Itacoatiara                 | Belém               |
| Manáos                      | Parahyba            |
| Rio Madeira                 | Independencia       |
|                             | Parahyba            |
| Ceará                       | Pernambuco          |
| Fortaleza                   | Recife [Pernambuco] |
| Quixada                     |                     |
| Maranhão                    | Rio Grande do Norte |
| Maranhão                    | Baixa Verde         |
|                             | Ceará Mirim         |
| Matto Grosso                | Extremoz            |
| Guajara-Mirim Falls         | Natal               |
| (233 km. above Porto Velho) | Papery              |
| Porto Velho                 | Lake Papery         |

The collection includes 81 species, which are distributed among higher groups as follows:

#### AMPHIBIA

|                      | Number of<br>genera | Number of<br>species | Number of<br>specimens |
|----------------------|---------------------|----------------------|------------------------|
| Apoda.....           | 1                   | 1                    | 1                      |
| Caeciliidae.....     | 1                   | 1                    | 1                      |
| Caudata.....         | 1                   | 1                    | 1                      |
| Plethodontidae.....  | 1                   | 1                    | 1                      |
| Salientia.....       | 8                   | 19                   | 189                    |
| Bufonidae.....       | 1                   | 3                    | 95                     |
| Leptodactylidae..... | 1                   | 5                    | 58                     |
| Hylidae.....         | 2                   | 6                    | 22                     |
| Dendrobatidae.....   | 1                   | 2                    | 3                      |
| Microhylidae.....    | 2                   | 2                    | 5                      |
| Ranidae.....         | 1                   | 1                    | 6                      |

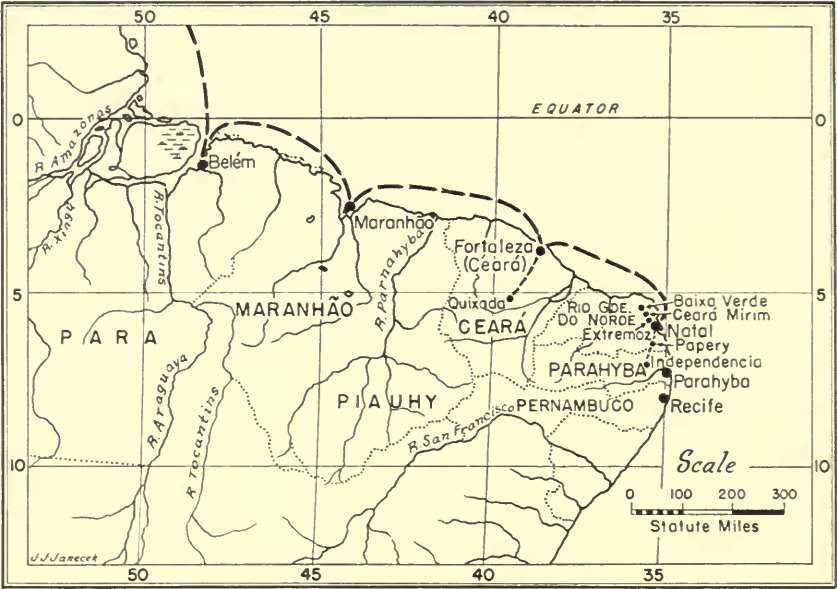


FIG. 85. Northeastern Brazil, showing the collecting stations of the Hopkins-Branner Expedition of 1911.

REPTILIA

|                                   | Number of<br>genera | Number of<br>species | Number of<br>specimens |
|-----------------------------------|---------------------|----------------------|------------------------|
| Chelonia . . . . .                | 5                   | 5                    | 10                     |
| Pelomedusidae . . . . .           | 1                   | 1                    | 1                      |
| Chelidae . . . . .                | 1                   | 1                    | 1                      |
| Kinosternidae . . . . .           | 1                   | 1                    | 5                      |
| Emydidae . . . . .                | 1                   | 1                    | 2                      |
| Testudinidae . . . . .            | 1                   | 1                    | 1                      |
| Crocodylia . . . . .              | 1                   | 1                    | 1                      |
| Crocodylidae . . . . .            | 1                   | 1                    | 1                      |
| Sauria . . . . .                  | 19                  | 27                   | 335                    |
| Gekkonidae . . . . .              | 4                   | 4                    | 27                     |
| Anguidae . . . . .                | 1                   | 1                    | 2                      |
| Iguanidae . . . . .               | 6                   | 7                    | 143                    |
| Teiidae . . . . .                 | 5                   | 5                    | 127                    |
| Amphisbaenidae . . . . .          | 2                   | 8                    | 24                     |
| Scincidae . . . . .               | 1                   | 2                    | 12                     |
| Serpentes . . . . .               | 20                  | 27                   | 70                     |
| Leptotyphlopidae . . . . .        | 1                   | 1                    | 1                      |
| Colubridae (sens. lat.) . . . . . | 18                  | 25                   | 68                     |
| Elapidae . . . . .                | 1                   | 1                    | 1                      |

APODA

Caecilidae

Siphonops paulensis Boettger

*Siphonops paulensis* Boettger, 1892, Kat. Batr. Mus. Senck., p. 62.

RIO GRANDE DO NORTE: Ceará Mirim, 1 (49897).

*Remarks*.—Length 290 mm. (body in lateral curves); diameter 10 by 12 mm., somewhat flattened; primary rings 113 postgular, only the first incomplete ventrad, the last two incomplete dorsad; secondary rings two anteriorly.

## CAUDATA

### Plethodontidae

#### *Oedipus paraensis* Unterstein

*Oedipus paraensis* Unterstein, 1930, Zool. Anz., 87: 271.

PARÁ: Belém, 1 (65003).

*Remarks*.—Toes and fingers fully webbed, the third extending into a conspicuous point. Costal grooves 13, folds between adpressed toes 4; a dorsal longitudinal groove; a slight vertical groove behind the angle of the jaw; no groove from eye. Brown above, paler beneath without sharp dividing line.

## SALIENTIA

### Bufonidae

#### *Bufo marinus* Linnaeus

*Rana marina* Linnaeus, 1758, Syst. Nat., 10th ed., 1: 356.

*Bufo marinus* Schneider, 1799, Hist. Amph., pt. 1, p. 219.

BOLIVIA: Abuna, 4 (49776–77, 49779–80).

AMAZONAS: Itacoatiara, 2 (49742, 49762); Manáos, 1 (49802); Rio Madeira, 8 (49785–92).

MARANHÃO: Maranhão, 1 (49717).

#### *Bufo paracnemis* Lutz

*Bufo paracnemis* Lutz, 1926, Trab. Inst. Oswaldo Cruz, p. 9.

RIO GRANDE DO NORTE: Ceará Mirim, 21 (49633–49, 49654–57).

*Remarks*.—A specimen from Baturité, Ceara, C.N.H.M. No. 6212, collected by R. H. Becker July 24, 1913, is a gigantic female specimen measuring 175 mm. in body length. It agrees with the specimens in the above list.

This distinct species, sharply characterized by the gland on the upper side of the tibial joint of the leg, is represented by numerous specimens in the collections of Chicago Natural History Museum

from various localities on the upper Paraguay River in Matto Grosso, from Paraguay, and from Misiones, Argentina. *Bufo marinus* does not occur in the savanna area.

The representative of *Bufo marinus* and *paracnemis* in the east Brazilian forest region is *Bufo ictericus* Spix, which is sharply distinct from both *marinus* and *paracnemis*. The type locality of *marinus* has been restricted by various authors to Surinam; the type locality of *paracnemis* is Bello Horizonte, Minas Geraes; the type locality of *ictericus* is the State of Rio de Janeiro.

### **Bufo granulosus Spix**

*Bufo granulosus* Spix, 1825, Spec. Nov. Test. Ran., p. 61, pl. 21, fig. 2.

AMAZONAS: Itacoatiara, 29 (49738–41, 49743–61, 49763–68).

CEARÁ: Fortaleza, 1 (49705).

PARAHYBA: Independencia, 4 (49781–84).

RIO GRANDE DO NORTE: Baixa Verde, 2 (49720–21); Ceará Mirim, 19 (49628, 49650–53, 49658–70, 49723); Lake Papery, 1 (49857); Natal, 1 (49672).

*Remarks.*—The series from northeastern Brazil is to be regarded as the true *granulosus* Spix, type locality Bahia. *Bufo globulosus*, placed in the synonymy of *granulosus* by Peters, is to be considered as a strict synonym, being also from Bahia. Berg, and Parker following Berg, endeavored to reinstate *globulosus* because of page priority, which is not an acceptable reason for change, as elsewhere agreed by Parker. *Bufo marmoratus* Wagler is based exclusively on *globulosus*.

The specimens from Itacoatiara differ from the others in having the ridges of the head less sharply denticulate and often quite smooth, and in all the specimens the supra-nasal ridge is smooth; these trivial differences do not warrant nomenclatural distinction, but point to the possible existence of other characters, voice perhaps, for field investigation.

### **Leptodactylidae**

#### **Leptodactylus pentadactylus mattogrossensis** subsp. nov.

*Type.*—Chicago Natural History Museum No. 9240, from manganese mine, Urucum de Corumba, Matto Grosso. Adult female, collected August 19, 1926, by Karl P. Schmidt.



*Diagnosis.*—Dorsal cross-bands absent, dorsal skin tuberculate, size in excess of 150 mm. Male, in the breeding season, with a large transverse denticulate horny tubercle on each side of the chest and with areas of small horny spines posterior to them. A single stout horny spine on the prepollex.

*Description of type.*—Body stout, almost parallel-sided; femora relatively short, heels overlapping; forearms much broader than upper arm; skin of back with small warts and elongate glandular folds; rounded or elongate larger glands on the sides; throat and belly entirely smooth; posterior face of thighs strongly granulate; toes with a trace of a web at the base, continued as a narrow ridge on the sides of the toes; inner metatarsal tubercle elongate, connected with a tarsal ridge; outer metatarsal tubercle rounded; an obscure pad between inner and outer tubercles; metacarpal tubercles very large; tympanum smaller than the eye, separated by its own diameter from the posterior edge of the orbit.

Coloration pale brown with darker mottlings; obscure dark cross-bands on the limbs and dark spotting on the yellow ventral surface.

Snout to vent 158 mm., width of head 64, length of tibia 75, tip of snout to posterior border of tympanum 53.

*Male allotype.*—A large male, C.N.H.M. No. 9241, collected with the type is represented by a skin and skeleton. The secondary sex characters are enormously developed. A large denticulate transverse horny tubercle is present on each side of the chest. Behind these are two areas of small horny spines, which extend on to the inner surfaces of the upper arm. The thumb has a stout black horny spine as wide as long. The forearms are greatly enlarged, as much as in *L. ocellatus*. The enlargement of the forearm is reflected in the enormous development of flanges on the humerus. The tympanum is no larger in the male than in the female.

*Paratypes.*—Five juvenile specimens, C.N.H.M. Nos. 9185 and 9205-8, were collected beneath the saw mill at Urucum. These exhibit the strong black reticulation of the posterior surfaces of the thighs on a red ground color, characteristic of juveniles of this species. The black reticulation extends over the ventral surfaces and the red color is present on the flanks.

A half-grown male, C.N.H.M. No. 9192, body length 131 mm., collected with the juvenile specimens at Urucum, retains the strong ventral reticulation of the juveniles. The spines of the chest are not at all developed and those of the thumb are barely distinguishable.

A medium-sized female, C.N.H.M. No. 5640, from Baturité, Ceará, collected by R. H. Becker, July 24, 1913, agrees excellently with the Matto Grosso specimens.

We refer the following specimens from northeastern Brazil in the California Academy of Sciences to this subspecies:

CEARÁ: Fortaleza, 1 (49704).

RIO GRANDE DO NORTE: Ceará Mirim, 8 (49620–25, 49629, 49722); Lake Papery, 1 (49846); Papery, 1 (49707).

This series includes eight males and three females. The largest male measures 170 mm. in body length, with a head width of 75 mm. The series is very uniform in general appearance, much darkened by formalin preservation. None of the males have the horny chest tubercles but the corresponding scar is well developed. The tubercle on the thumb is large but likewise lacks the horny covering.

*Comparisons.*—Readily distinguished from *pentadactylus pentadactylus* (the Amazonian and Guianan form) by the absence of the dorsal cross-bands, more tuberculate dorsal skin, larger size, and much greater development of the male secondary sex characters. The relations with *p. labyrinthicus* Spix, of the southeast Brazilian forest region (Pernambuco to Rio Grande do Sul) are by no means clear, but apparently that form has a narrower head and smoother dorsum.

*Remarks.*—Müller (1927) has shown that the name *gigas* Spix, suggested by Lutz (1926) for specimens from Ceará, must be referred to *pentadactylus pentadactylus*, and that *labyrinthicus* Spix is applicable to the giant *Leptodactylus* of southeastern Brazil. We regard *flavopictus* Lutz as a synonym of *labyrinthicus*. There appears to be no previous name for the large form with the characteristic savanna corridor distribution from Matto Grosso to northeastern Brazil.

### ***Leptodactylus caliginosus* Girard**

*Leptodactylus caliginosus* Girard, 1853, Proc. Acad. Nat. Sci. Phila., 6: 422.

AMAZONAS: Itacoatiara, 1 (40731).

### ***Leptodactylus typhonius* Daudin**

*Rana typhonia* Daudin, 1803, Hist. Rain., p. 55, pl. 17, figs. 3–4.

*Leptodactylus typhonius* Fitzinger, 1826, Class. Rept., p. 64.

AMAZONAS: Manáos, 3 (49798–800).



**Leptodactylus ocellatus** Linnaeus

*Rana ocellata* Linnaeus, 1758, Syst. Nat., 10th ed., 1: 211.

*Leptodactylus ocellatus* Girard, 1853, Proc. Acad. Nat. Sci. Phila., 6: 420.

AMAZONAS: Itacoatiara, 9 (49724, 49725–29, 49732, 49734–37).

CEARÁ: Fortaleza, 8 (49695–702); Quixada, 2 (49718–19).

PARAHYBA: Independencia, 4 (49678–80, 49687).

RIO GRANDE DO NORTE: Ceará Mirim, 1 (49626); Extremoz, 1 (49714); Lake Papery, 6 (49851–56); Natal, 4 (49674–77); Papery, 5 (49708–12).

**Leptodactylus nanus** Müller

*Leptodactylus nanus* Müller, 1922, Blätt. Aquar.-Terrar.-Kunde, 33: 168.

AMAZONAS: Manáos, 1 (49801).

MATTO GROSSO: Guajara-Mirim, 2 (49771, 49845).

**Hylidae****Hyla taurina** Steindachner

*Osteocephalus taurinus* Steindachner, 1862, Arch. Zool., 2: 77, pl. 6, figs. 1–3.

*Hyla taurina* Boulenger, 1882, Cat. Batr. Sal., Brit. Mus., p. 363.

BOLIVIA: Abuna, 3 (49773–5).

**Hyla spegazzinii** Boulenger

*Hyla spegazzinii* Boulenger, 1889, Ann. Mus. Genova, (2), 7: 247, pl. 2, figs. 1 and 1, a.

PARAHYBA: Independencia, 5 (49686, 49688–91).

RIO GRANDE DO NORTE: Extremoz, 2 (49715–16); Papery, 2 (49713, 49850).

*Remarks.*—*Hyla spegazzinii*, described from Chaco, Argentina, is a frog extremely characteristic of the upper Paraguay Basin. Müller (1927) has referred Pernambuco specimens to this species. Our specimens differ from those of Matto Grosso only in somewhat larger average size. The senior author and H. W. Parker agreed to this allocation of these specimens in conference in 1932.

**Hyla crepitans** Wied

*Hyla crepitans* Wied, 1825, Beitr. Naturg. Bras., p. 525.

PARAHYBA: Independencia, 1 (49685).

**Hyla nana** Boulenger

*Hyla nana* Boulenger, 1889, Ann. Mus. Genova, (2), 7: 249, pl. 2, fig. 2.

RIO GRANDE DO NORTE: Ceará Mirim, 3 (49630-32).

**Hyla rubra** Daudin

*Hyla rubra* Daudin, 1803, Hist. Rain., p. 26, pl. 9.

CEARÁ: Fortaleza, 1 (49703).

PARAHYBA: Independencia, 3 (49692-94).

**Phyllomedusa hypochondrialis** Daudin

*Hyla hypochondrialis* Daudin, 1803, Hist. Rain., p. 29, pl. 10, fig. 1.

*Phyllomedusa hypochondrialis* Cope, 1862, Proc. Acad. Nat. Sci. Phila., 1862: 355.

RIO GRANDE DO NORTE: Lake Papery, 1 (49847).

"BRAZIL": 1 (49894).

**Dendrobatidae****Dendrobates trivittatus** Spix

*Hyla trivittatus* Spix, 1825, Spec. Nov. Test. Ran., p. 35, pl. 9, fig. 1.

*Dendrobates trivittatus* Boulenger, 1882, Cat. Batr. Sal., Brit. Mus., p. 144.

AMAZONAS: Manáos, 1 (C.A.S., no number).

**Dendrobates braccatus** Cope

*Dendrobates braccatus* Cope, 1887, Proc. Amer. Phil. Soc., 24: 53.

MATTO GROSSO: Guajara-Mirim Falls, 2 (49770, 49844).

**Microhylidae****Elachistocleis ovale** Schneider

*Rana ovalis* Schneider, 1799, Hist. Amph., p. 131.

*Elachistocleis ovale* Parker, 1927, Occ. Pap. Mus. Zool., Univ. Mich., No. 187, p. 4.

AMAZONAS: Itacoatiara, 4 (49725-26, 49730, 49733).

**Hypopachus incrassatus** Cope

*Stereocyclops incrassatus* Cope, 1869, Proc. Amer. Phil. Soc., 11: 165.

*Hypopachus incrassatus* Parker, 1934, Monog. Microhylidae, p. 111.

RIO GRANDE DO NORTE: Natal, 1 (49673).

**Ranidae*****Rana palmipes* Spix**

*Rana palmipes* Spix, 1825, Spec. Nov. Test. Ran., p. 29, pl. 5, fig. 1.

RIO GRANDE DO NORTE: Ceará Mirim, 1 (49627); Lake Papery, 2 (49848-49); Natal, 1 (49671); Papery, 1 (49706).

**CHELONIA****Pelomedusidae*****Podocnemis unifilis* Troschel**

*Podocnemis unifilis* Troschel, 1848, in Schomburgk, Reise Brit. Guiana, p. 647.

PARÁ: Belém, 1 (49288).

**Chelidae*****Rhinemys nasuta* Schweigger**

*Emys nasuta* Schweigger, 1914, Prod. Chel., p. 29.

*Rhinemys nasuta* Boulenger, 1889, Cat. Chel. Brit. Mus., p. 218.

RIO GRANDE DO NORTE: Papery, 1 (49294).

**Kinosternidae*****Kinosternon scorpioides* Linnaeus**

*Testudo scorpioides* Linnaeus, 1766, Syst. Nat., 12th ed., 1: 352.

*Cinosternon scorpioides* Boulenger, 1889, Cat. Chel. Brit. Mus., p. 293.

PARÁ: Belém, 4 (49286, 49291-3).

RIO GRANDE DO NORTE: Lake Papery, 1 (49892).

**Emydidae*****Geoemyda punctularia* Daudin**

*Testudo punctularia* Daudin, 1802, Hist. Nat. Rept., 2: 249.

*Geoemyda punctularia* Siebenrock, 1909, Zool. Jahrb., Suppl., 10: 497.

RIO GRANDE DO NORTE: Papery, 2 (49287, 49290).

**Testudinidae*****Testudo denticulata* Linnaeus**

*Testudo denticulata* Linnaeus, 1766, Syst. Nat., 12th ed., 1: 352.

RIO GRANDE DO NORTE: Papery, 1 (49289).

**CROCODILIA****Crocodylidae****Caiman latirostris** Daudin

*Crocodilus latirostris* Daudin, 1802, Hist. Nat. Rept., 2: 417.

*Caiman latirostris* Boulenger, 1889, Cat. Chel. Brit. Mus., p. 293.

RIO GRANDE DO NORTE: Extremoz, 1 (49285).

**SAURIA****Gekkonidae****Gonatodes humeralis** Guichenot

*Gymnodactylus humeralis* Guichenot, 1855, in Castelnau, Voy. Amer. Mer., Rept., p. 6, pl. 3, fig. 1.

*Gonatodes humeralis* Boulenger, 1885, Cat. Liz. Brit. Mus., 1: 62, pl. 5, fig. 3.

BOLIVIA: Abuna, 1 (49890).

AMAZONAS: Manáos, 3 (49828–30).

**Gymnodactylus geckoides** Spix

*Gymnodactylus geckoides* Spix, 1825, Spec. Nov. Lacert. Bras., p. 17, pl. 18, fig. 1.

RIO GRANDE DO NORTE: Baixa Verde, 3 (49397–99); Ceará Mirim, 1 (49427); Extremoz, 1 (49607); Natal, 3 (49569–70, 49572).

**Hemidactylus mabouia** Moreau de Jonnès

*Gecko mabouia* Moreau de Jonnès, 1818, Bull. Soc. Phil. Paris, 1818: 138.

*Hemidactylus mabouia* Duméril and Bibron, 1836, Erp. Gén., 3: 362.

AMAZONAS: Manáos, 2 (49808, 49827).

PARAHYBA: Independencia, 1 (49492).

RIO GRANDE DO NORTE: Baixa Verde, 6 (49391–96); Ceará Mirim, 2 (49528–29); Extremoz, 2 (49608, 49619); Natal, 1 (49571).

**Thecadactylus rapicaudus** Houttuyn

*Gecko rapicauda* Houttuyn, 1782, Verh. Genotsch. Vlissing., 9: 322, pl. 3, fig. 1.

*Thecadactylus rapicaudus* Gray, 1845, Cat. Liz. Brit. Mus., p. 146.

BOLIVIA: Abuna, 1 (49888).

## Iguanidae

### *Polychrus acutirostris* Spix

*Polychrus acutirostris* Spix, 1825, Spec. Nov. Lacert. Bras., p. 15, pl. 14A.

RIO GRANDE DO NORTE: Ceará Mirim, 2 (49419-20).

### *Plica plica* Linnaeus

*Lacerta plica* Linnaeus, 1758, Syst. Nat., 10th ed., 1: 367.

*Plica plica* Stejneger, 1901, Proc. U. S. Nat. Mus., 24: 182.

BOLIVIA: Abuna, 1 (49782).

### *Iguana iguana iguana* Linnaeus

*Lacerta iguana* Linnaeus, 1758, Syst. Nat., 10th ed., 1: 206.

*Iguana iguana iguana* Müller, 1927, Abh. Senck. Naturf. Ges., 40: 285.

BOLIVIA: Abuna, 1 (49783).

RIO GRANDE DO NORTE: Ceará Mirim, 1 (49411); Papery, 4 (49536-39).

### *Tropidurus hispidus* Spix

*Agama hispida* Spix, 1825, Spec. Nov. Lacert. Bras., p. 12, pl. 15, fig. 2.

*Tropidurus hispidus* Peters, 1877, Monatsber. Akad. Wiss. Berlin, 1877: 409.

CEARÁ: Fortaleza, 10 (49579-88); Quixada, 1 (49611).

MARANHÃO: Maranhão, 23 (49507-28, 49615).

PARAHYBA: Independencia, 13 (49453-54, 49456-66); Parahyba River, 2 (49880-81).

PERNAMBUCO: Recife, 3 (49875-77).

RIO GRANDE DO NORTE: Baixa Verde, 15 (49358-71, 49614); Ceará Mirim, 7 (49412-18); Extremoz, 3 (49604-06); Natal, 17 (49542-54, 49884-87); Lake Papery, 3 (49858-59, 49861).

### *Tropidurus spinulosus* Cope

*Microlophus spinulosus* Cope, 1862, Proc. Acad. Nat. Sci. Phila., 1862: 351.

*Tropidurus (Microlophus) spinulosus* Boettger, 1885, Zeitschr. f. Naturw., 58: 216.

MATTO GROSSO: Porto Velho, 5 (49834-7, 49843).

### *Platynotus semitaeniatus* Spix

*Agama semitaeniata* Spix, 1825, Spec. Nov. Lacert. Bras., p. 13, pl. 16, fig. 1.

*Platynotus semitaeniatus* Wagler, 1830, Syst. Amph., p. 146.

*Tapinurus scutipunctatus* Amaral, 1932, Mem. Inst. Butantan, 7: 65, figs. 22–25.

CEARÁ: Quixada, 3 (49609–10, 49612).

PARAHYBA: Independencia, 25 (49455, 49467–90).

RIO GRANDE DO NORTE: Baixa Verde, 5 (49386–90); Natal, 1 (49618).

*Remarks.*—As reported by Amaral, Mertens suspected *Tapinurus scutipunctatus* to be a synonym of *Platynotus semitaeniatus* and *Tapinurus* of *Platynotus*. There can be no question as to their generic and specific identity. The body form of this species strongly suggests the rock crevice habitat.

### **Urocentron azureum** Linnaeus

*Lacerta azurea* Linnaeus, 1758, Syst. Nat., 10th ed., 1: 202.

*Urocentron azureum* Kaup, 1827, Isis, 1827: 612.

AMAZONAS: Manáos, 1 (C.A.S., no number).

## **Anguidae**

### **Diploglossus lessonae** Peracca

*Diploglossus lessonae* Peracca, 1890, Boll. Mus. Zool. Torino, 5, No. 77: 1.

*Diploglossus tenuifasciatus* Parker, 1924, Ann. Mag. Nat. Hist., (9), 13: 586, fig.

RIO GRANDE DO NORTE: Papery, 2 (49540–41).

*Remarks.*—Our specimens agree excellently with the description of *lessonae* in the major character of the single large prefrontal and, in the smaller specimen, in details of coloration. They agree further in having two pairs of chin shields in contact with the lower labials, the second pair broadly so in one specimen and only narrowly so in the other. Both specimens have six upper labials on each side in front of the center of the eye, and two loreals on each side. The larger specimen differs in having the broad brown cross-bands reduced to narrow lines in a mode of pattern evolution familiar in the family Anguidae. Our two specimens thus connect the supposed *tenuifasciatus* with *lessonae*, both *lessonae* and *tenuifasciatus* having been described from single specimens. The slight differences in the arrangement of head shields seem to us to fall well within the range of probable variation and the supposed differences in color pattern likewise within limits of ontogenetic variation.



## Teiidae

**Tupinambis teguixin** Linnaeus

*Lacerta teguixin* Linnaeus, 1758, Syst. Nat., 10th ed., 1: 208.

*Tupinambis teguixin* Boulenger, 1885, Cat. Liz. Brit. Mus., 2: 335.

RIO GRANDE DO NORTE: Ceará Mirim, 2 (49409–10).

**Gymnophthalmus quadrilineatus** Linnaeus

*Lacerta quadrilineata* Linnaeus, 1766, Syst. Nat., 12th ed., 1: 371.

*Gymnophthalmus quadrilineatus* Merrem, 1820, Syst. Amph., p. 74.

RIO GRANDE DO NORTE: Baixa Verde, 1 (49373).

**Kentropyx calcaratus** Spix

*Kentropyx calcaratus* Spix, 1825, Spec. Nov. Lacert. Bras., p. 21, pl. 22, fig. 2.

PERNAMBUCO: Recife, 1 (49874).

**Ameiva ameiva ameiva** Linnaeus

*Lacerta ameiva* Linnaeus, 1758, Syst. Nat., 10th ed., 1: 202.

*Ameiva ameiva ameiva* Barbour and Noble, 1915, Bull. Mus. Comp. Zool., 59: 462.

BOLIVIA: Abuna, 2 (49781, 49784).

AMAZONAS: Manáos, 18 (49803–07, 49810–17, 49820–24).

CEARÁ: Fortaleza, 6 (49573–78).

MARANHÃO: Maranhão, 12 (49499–506, 49529–32).

MATTO GROSSO: Porto Velho, 7 (49832–33, 49838–42).

PARAHYBA: Independencia, 16 (49441–52, 49495–98); Parahyba River, 1 (49883).

PERNAMBUCO: Recife, 1 (49878).

RIO GRANDE DO NORTE: Ceará Mirim, 14 (49400–08, 49430, 49432–35); Lake Papery, 2 (49860, 49869); Natal, 1 (49568).

*Remarks.*—The northeastern Brazilian specimens, compared with those from the Amazon basin, tend to have the lateral spots somewhat confluent vertically and fewer such vertical series. The differences between the two series seem much too slight to warrant taxonomic distinction.

**Cnemidophorus ocellifer** Spix

*Tejus ocellifer* Spix, 1825, Spec. Nov. Lacert. Bras., p. 23.

*Cnemidophorus ocellifer* Peters, 1877, Monatsber. Akad. Wiss. Berlin, 1877: 414.

CEARÁ: Fortaleza, 10 (49591–600); Quixada, 1 (49613).

PARAHYBA: Independencia, 3 (49493–94, 49616); Parahyba River, 1 (49882).

PERNAMBUCO: Recife, 2 (49871, 49873).

RIO GRANDE DO NORTE: Baixa Verde, 11 (49376–85, 49617); Ceará Mirim, 6 (49431, 49436–40); Natal, 13 (49555–67).

*Remarks.*—We believe that this species has the characteristic distribution of the savanna corridor forms. Burt, in his revision and maps (1931, pp. 43–46, figs. 10–11), confuses this completely; the range of *ocellifer* is shown as extending along the southeastern coast of Brazil, for which there is no evidence; his detailed map (fig. 10) places a locality in Santa Catharina, for which he lists no specimen. We have no specimens from Paraguay or Matto Grosso, but have no reason to doubt the records of Cope and Peracca.

### Amphisbaenidae

#### **Amphisbaena fuliginosa** Linnaeus

*Amphisbaena fuliginosa* Linnaeus, 1758, Syst. Nat., 10th ed., 1: 229.

AMAZONAS: Manáos, 1 (49818).

#### **Amphisbaena alba** Linnaeus

*Amphisbaena alba* Linnaeus, 1758, Syst. Nat., 10th ed., 1: 229.

AMAZONAS: Manáos, 2 (49825–26).

RIO GRANDE DO NORTE: Lake Papery, 1 (49535); Extremoz, 1 (49603).

#### **Amphisbaena subocularis** Peters

*Amphisbaena subocularis* Peters, 1878, Monatsber. Akad. Wiss. Berlin, 1878: 779, fig. 2.

RIO GRANDE DO NORTE: Lake Papery, 5 (49862, 49864–65, 49867–68).

BAHIA: Queimados, 1 (C.N.H.M. No. 5660).

#### **Amphisbaena brachyura** Amaral

*Amphisbaena brachyura* Amaral, 1932, Mem. Inst. Butantan, 7: 55.

RIO GRANDE DO NORTE: Extremoz, 2 (49601–2).

**Amphisbaena heathi** Schmidt

*Amphisbaena heathi* Schmidt, 1936, *Herpetologica*, 1: 29.

RIO GRANDE DO NORTE: Baixa Verde, 1 (49374, type); Ceará Mirim, 1 (49424, paratype).

**Amphisbaena spixi** Schmidt

*Amphisbaena spixi* Schmidt, 1936, *Herpetologica*, 1: 30.

RIO GRANDE DO NORTE: Ceará Mirim, 3 (49423, type; 49421–22, paratypes).

BRAZIL: 1 (49896, paratype).

**Amphisbaena slevini** Schmidt

*Amphisbaena slevini* Schmidt, 1936, *Herpetologica*, 1: 31.

AMAZONAS: Manáos, 1 (49809, type).

**Leposternon polystegoides** Schmidt

*Leposternon polystegoides* Schmidt, 1936, *Herpetologica*, 1: 31.

RIO GRANDE DO NORTE: Lake Papery, 5 (49866, type; 49375, 49533–34, 49863, paratypes).

**Scincidae****Mabuya mabouya mabouya** Lacépède

*Lacerta mabouya* Lacépède, 1788, *Hist. Nat. Quadr. Ovip.*, 2: 378.

*Mabuya mabouya mabouya* Dunn, 1935, *Proc. Acad. Nat. Sci. Phila.*, 87: 544.

BOLIVIA: Abuna, 1 (49889).

AMAZONAS: Itacoatiara, 1 (49769); Manáos, 1 (49819).

MATTO GROSSO: Guajara-Mirim, 1 (49772); Porto Velho, 1 (49831).

**Mabuya heathi** sp. nov.

*Type*.—California Academy of Sciences No. 49589 from Fortaleza, Ceará, Brazil. Adult male, collected by Harold Heath in 1911.

*Diagnosis*.—No auricular denticles; dorsal scales faintly grooved rather than keeled; six dark stripes on the body; two frontoparietals; appressed legs not overlapping; scales in 30 rows.

*Description of type*.—Body and head more depressed than in *Mabuya mabouya*; limbs relatively short, separated when appressed

by somewhat less than one-fourth the length of the leg; 30 scale rows around the body; supranasals in contact; prefrontals separated by the suture of the frontonasal with the frontal; two frontoparietals; parietals meeting behind the occipital; a single pair of nuchals; 4 supraoculars; superciliaries  $5/4$ ; 15 smooth lamellae beneath the fourth toe; 53 dorsal scales from a point opposite the posterior face of the hind limb to the nuchals.

General ground color grayish-yellow beneath, grayish-brown on the sides, and brown above; a sharply defined light line along the labial border enclosing the ear opening and narrowed and sharp about one-half scale width extending to the hind limb, bordered above and below by a dark brown line; the upper brown line 2 scales in width separated by about the same breadth from an obscure dorso-lateral brown line which is separated from its fellow by only two half scales; the faint dorso-lateral lines are marked at intervals by dark spots and these two lines merge on the base of the tail.

*Paratypes*.—CEARÁ: Fortaleza, 1 (49590). PARAHYBA: Independencia, 1 (49491). RIO GRANDE DO NORTE: Baixa Verde, 1 (49372); Ceará Mirim, 2 (49425–26). “BRAZIL”: 1 (49893).

*Comparisons*.—This species is distinguished from *Mabuya guaporicola* Dunn by the following two characters: the appressed legs are separated by about one-fourth the length of the hind leg instead of one-half, and there are six dark dorsal and lateral stripes. It is distinguished from *Mabuya mabouya* by its shorter legs and dorsal stripes.

*Remarks*.—This distinct species may be directly related to *guaporicola* and thus represent the same distributional relation as that of *Cnemidophorus ocellifer* and the various species listed as characteristic of the savanna corridor.

## SERPENTES

### Leptotyphlopidae

#### Leptotyphlops albifrons Wagler

*Stenostoma albifrons* Wagler, 1824, in Spix, Serp. Bras., p. 68, pl. 25, fig. 3.

*Leptotyphlops albifrons* Amaral, 1929, Mem. Inst. Butan., 4: 138.

RIO GRANDE DO NORTE: Lake Papery, 1 (49870).

*Remarks*.—This specimen may belong to true *albifrons*, the *albifrons* of authors having been shown to be a complex of quite distinct species. It has 260 scales from rostral to tail spine, 14 subcaudals,

14 scales around the body, and 10 around the tail. The total length is 135 mm., tail 6, diameter 2.2. The caudal spot involves the tail spine and one and a half scales above and five below. The arrangement of the head shields is essentially as figured by Klauber for the otherwise distinct *Leptotyphlops subcrotilla*.

## Colubridae

### *Helicops leopardinus* Schlegel

*Homalopsis leopardina* Schlegel, 1837, Phys. Serp., 2: 358.

*Helicops leopardinus* Jan, 1865, Arch. Zool. Anat. Phys., 3: 253.

RIO GRANDE DO NORTE: Ceará Mirim, 1 (48335).

*Remarks*.—Female; scales in 19 rows; ventrals 129, anal divided; caudals 54; upper labials 8; lower 10; oculars 1-3 on each side; temporals 1-2 on each side; length 190 mm.; tail 39.

### *Helicops angulatus* Linnaeus

*Coluber angulatus* Linnaeus, 1758, Syst. Nat., 10th ed., 1: 217.

*Helicops angulatus* Duméril and Bibron, 1854, Erp. Gén., 7: 746.

RIO GRANDE DO NORTE: Ceará Mirim, 6 (49324-26, 49344, 49349, 49353).

| No.   | Sex | Scale rows | Vent. | Caud. | S.L. | I.L. | Preoc. | Postoc. | Temp.   | Total length | Tail |
|-------|-----|------------|-------|-------|------|------|--------|---------|---------|--------------|------|
| 49324 | ♂   | 21-19-17   | 117   | 98    | 8    | 10   | 1      | 2       | 2/1-3/3 | 738          | 285  |
| 49325 | ♂   | 21-19-17   | 116   | 8     | 8    | 10   | 1      | 1       | 2/3-3   | ...          | ...  |
| 49326 | ♂   | 21-19-17   | 119   | 98    | 8    | 10   | 1      | 2       | 1/2-4/3 | 683          | 262  |
| 49344 | ♂   | 21-19-17   | 116   | 91+   | 8    | 10   | 1      | 2       | 2/3-4/3 | 680+         | 257+ |
| 49349 | ♀   | 21-19-17   | 121   | 86    | 8    | 10   | 1      | 2       | 1/2-3   | 814          | 260  |
| 49353 | ♀   | 23-19-17   | 117   | 84    | 8    | 10   | 1      | 2       | 2-3     | 850          | 275  |

Anal. invariably two.

### *Helicops polylepis* Günther

*Helicops polylepis* Günther, 1861, Ann. Mag. Nat. Hist., (3), 7: 426.

BOLIVIA: Abuna, 1 (49778).

*Remarks*.—Female; scale rows 25-23-19; ventrals 127, anal divided; caudals 71; upper labials 9; lower labials 12; oculars 1-2; temporals 1-2; length 908; tail 259.

### *Drymobius bifossatus* Raddi

*Coluber bifossatus* Raddi, 1820, Mem. Soc. Ital. Modena, 18: 333.

*Drymobius bifossatus* Boulenger, 1894, Ann. Mag. Nat. Hist., (6), 13: 346.

PARAHYBA: Parahyba River, 1 (49879).

*Remarks*.—Female; scale rows 17–15–15; ventrals 176, anal divided; caudals 67; upper labials 8; lower labials 10; oculars 1–2; temporals 2–2; total length 1440; tail 335.

### **Drymobius dendrophis** Schlegel

*Herpetodryas dendrophis* Schlegel, 1837, Phys. Serp., 2: 196.

*Drymobius dendrophis* Boulenger, 1894, Cat. Sn. Brit. Mus., 2: 15.

BRAZIL: Rio Madeira, 1 (49356).

*Remarks*.—Female; scale rows 17; ventrals 160, anal single; caudals 69; upper labials 9; lower labials 9; oculars 1–2; temporals 2–2; total length 1090; tail 502.

### **Spilotes pullatus pullatus** Linnaeus

*Coluber pullatus* Linnaeus, 1758, Syst. Nat., 10th ed., 1: 225.

*Spilotes pullatus pullatus* Amaral, 1929, Mem. Inst. Butan., 4: 83.

RIO GRANDE DO NORTE: Natal, 1 (49303); Papery, 1 (49296).

*Remarks*.—C.A.S. No. 49303, male; scale rows 16–18–10; ventrals 223, anal entire; caudals 113; upper labials 9; lower labials 8; oculars 1–2; temporals 1–2; total length 2125; tail 548; oblique yellow bands 21+8. C.A.S. No. 49296, skin only; scale rows 14–16–10; ventrals 218, anal entire; caudals 117; upper labials 7; lower labials 8/9; oculars 1–2; temporals 1–1.

### **Drymarchon corais corais** Boie

*Coluber corais* Boie, 1827, Isis, p. 537.

*Drymarchon corais corais* Amaral, 1929, Mem. Inst. Butan., 4: 84.

CEARÁ: Fortaleza, 1 (49308).

*Remarks*.—Skin only; scale rows 19–17–15; ventrals 209, anal entire; caudals 76; upper labials 9; lower labials 8/7; oculars 1–2; temporals 2–2.

### **Thalerophis richardi richardi** Bory St. Vincent

*Coluber richardi* Bory St. Vincent, 1823, Dict. Hist. Nat., 4: 588.

*Thalerophis richardi richardi* Oliver, 1948, Bull. Amer. Mus. Nat. Hist., 92: 219.

AMAZONAS: Manáos, 1 (49795).



*Remarks.*—Male; scale rows 15–15–11; ventrals 174, anal divided; caudals 167; upper labials 9; lower labials 11; oculars 1 2; temporals 1–2; total length 725; tail 278; scales smooth except for paravertebral rows.

### *Liophis cobella taeniogaster* Jan

*Liophis taeniogaster* Jan, 1863, Arch. Zool. Anat. Phys., 2: 292.

*Liophis cobella taeniogaster* Amaral, 1931, Bull. Antiv. Inst. Amer., 4: 87.

PERNAMBUCO: Recife, 1 (49872).

*Remarks.*—Female; scale rows 17–15–15; ventrals 153, anal divided; caudals 51; upper labials 8; lower labials 10; oculars 1–2; temporals 1–2; total length 571; tail 101.

### *Liophis poecilogyrus xerophilus* Amaral

*Leimadophis poecilogyrus xerophilus* Amaral, 1944, Pap. Avulsos Dept. Zool. Agric. São Paulo, 5: 81.

CEARÁ: Fortaleza, 1 (49307); Quixada, 1 (49304).

PARAHYBA: Independencia, 5 (49309–13).

RIO GRANDE DO NORTE: Baixa Verde, 1 (49315); Ceará Mirim, 4 (49336, 49339, 49341–42).

| No.   | Sex | Scale rows | Vent. | Caud. | S.L. | I.L.  | Preoc. | Postoc. | Temp. | Total length | Tail |
|-------|-----|------------|-------|-------|------|-------|--------|---------|-------|--------------|------|
| 49304 | ♀   | 19–19–15   | 152   | 52    | 8    | 10    | 1      | 2       | 1–2   | 209          | 36   |
| 49310 | ♀   | 19–19–15   | 156   | 47    | 8    | 10    | 1      | 2       | 1–2   | 193          | 30   |
| 49311 | ♀   | 19–19–15   | 157   | 52    | 8    | 10    | 1      | 2       | 1–2   | 205          | 33   |
| 49312 | ♀   | 19–19–15   | 154   | 52    | 8    | 10    | 1      | 2       | 1–2   | 175          | 29   |
| 49313 | ♀   | 19–19–15   | 154   | 51    | 8    | 11/10 | 1      | 2       | 1–2   | 205          | 34   |
| 49336 | ♀   | 19–19–15   | 153   | 52    | 8    | 10    | 1      | 2       | 1–2   | 264          | 45   |
| 49339 | ♀   | 19–19–15   | 152   | 51    | 8    | 10    | 1      | 2       | 1–2   | 172          | 28   |
| 49341 | ♀   | 19–19–15   | 157   | 53    | 8    | 10    | 1      | 2       | 1–2   | 182          | 31   |
| 49342 | ♀   | 19–19–15   | 152   | 46    | 8    | 10    | 1      | 2       | 1–2   | 200          | 30   |
| 49315 | ♂   | 19–19–15   | 155   | ..    | 8    | 10    | 1      | 2       | 1–2   | ..           | ..   |
| 49309 | ♀   | 19–19–15   | 152   | 52    | 8    | 9/10  | 1      | 2       | 1–2   | 475          | 85   |
| 49307 | ♀   | 19–19–15   | 156   | 53    | 8    | 10    | 1      | 2       | 1–2   | 660          | 118  |

Anal. invariably two.

*Remarks.*—No. 49307 has a uniform light belly; all others are spotted or cross-barred with black. We have followed Dunn in referring this species to *Liophis* (cf. Dunn 1944).

### *Liophis genimaculata* Boettger

*Liophis genimaculata* Boettger, 1885, Zeits. Ges. Naturw., 58: 229.

RIO GRANDE DO NORTE: Papery, 1 (49295).

*Remarks.*—Juvenile; scale rows 17–17–15; ventrals 201, anal divided; caudals 59; upper labials 8; lower labials 9/10; oculars 1–2; temporals 1–2; total length 181; tail 33.

### *Liophis viridis* Günther

*Liophis viridis* Günther, 1862, Ann. Mag. Nat. Hist., (3), 9: 58, pl. 9, fig. 2.

RIO GRANDE DO NORTE: Ceará Mirim, 1 (49320).

*Remarks.*—Male; scale rows 19–19–17; ventrals 192, anal divided; caudals 77; upper labials 8; lower labials 10; oculars 1–2; temporals 1–2/1; total length 247; tail 53.

### *Liophis reginae* Linnaeus

*Coluber reginae* Linnaeus, 1758, Syst. Nat., 10th ed., 1: 219.

*Liophis reginae* Duméril and Bibron, 1854, Erp. Gén., 7: 704.

AMAZONAS: Manáos, 1 (49796).

*Remarks.*—Female; ventrals 142, anal divided; caudals 65; upper labials 8; lower labials 10; oculars 1–2; temporals 1–2; total length 164; tail 37.

### *Lygophis lineatus* Linnaeus

*Coluber lineatus* Linnaeus, 1758, Syst. Nat., 10th ed., 1: 221.

*Lygophis lineatus* Cope, 1862, Proc. Acad. Nat. Sci. Phila., 1862: 76.

RIO GRANDE DO NORTE: Ceará Mirim, 3 (49334, 49340, 49343).

| No.   | Sex  | Scale rows | Vent. | Caud. | S.L. | I.L. | Preoc. | Postoc. | Temp. | Total length | Tail |
|-------|------|------------|-------|-------|------|------|--------|---------|-------|--------------|------|
| 49343 | juv. | 19–19–15   | 168   | 65    | 8    | 9    | 1      | 2       | 1–2   | 192          | 40   |
| 49340 | ♀    | 19–19–15   | 173   | 70    | 8    | 10   | 1      | 2       | 1–1   | 450          | 103  |
| 49334 | ♀    | 19–19–15   | 172   | 72    | 8    | 10   | 1      | 2       | 1–1½  | 525          | 125  |

Anal. invariably two.

### *Xenodon merremii* Wagler

*Ophis merremii* Wagler, in Spix, 1825, Spec. Nov. Serp. Bras., p. 47, pl. 17.

*Xenodon merremii* Boulenger, 1894, Cat. Sn. Brit. Mus., 2: 150.

RIO GRANDE DO NORTE: Baixa Verde, 3 (49316–17, 49319); Ceará Mirim, 6 (49321–22, 49327, 49329, 49348, 49350).

| No.   | Sex | Scale rows | Vent. | Caud. | S.L. | I.L.  | Preoc. | Postoc. | Temp.             | Total length | Tail |
|-------|-----|------------|-------|-------|------|-------|--------|---------|-------------------|--------------|------|
| 49319 | ♀   | 19-19-17   | 153   | 36    | 7    | 10    | 2      | 3       | 1-2               | ...          | ...  |
| 49317 | ♀   | 19-19-17   | 147   | 39    | 7    | 10    | 1      | 3       | 1-2               | 982          | 133  |
| 49316 | ♀   | 19-19-17   | 151   | 36    | 7    | 10    | 1      | 3       | 1-2               | ...          | ...  |
| 49327 | ♂   | 19-19-17   | 140   | 44    | 7    | 11    | 1      | 2       | 1-1 $\frac{1}{2}$ | 638          | 110  |
| 49329 | ♂   | 19-19-17   | 138   | 47    | 7    | 10    | 1      | 3       | 1-2               | 599          | 113  |
| 49322 | ♂   | 19-19-17   | 142   | 43    | 7    | 11    | 1      | 3       | 1-1               | ...          | ...  |
| 49321 | ♂   | 19-19-17   | 142   | 43    | 7    | 11/10 | 1      | 3       | 1-2               | ...          | ...  |
| 49348 | ♂   | 19-19-17   | 145   | 46    | 7    | 11    | 1      | 3       | 1-2               | ...          | ...  |
| 49350 | ♂   | 19-19-17   | 148   | 44    | 7    | 11/10 | 1      | 2       | 1-1 $\frac{1}{2}$ | 611          | 103  |

Anal. divided except in No. 49319.

### **Atractus badius** Boie

*Brachyorrhos badius* Boie, 1827, Isis, p. 540.

*Atractus badius* Boulenger, 1894, Cat. Sn. Brit. Mus., 2: 308.

AMAZONAS: Manáos, 1 (49797).

*Remarks.*—Female; scale rows 17-17-17; ventrals 166, anal entire; caudals 30; upper labials 7; lower labials 8; oculars 0-2; temporals 1-2; total length 133; tail 15; prefrontals greatly enlarged; internasals small; loreal elongate, narrowly entering eye on one side, excluded on the other; one pair of oval chin shields. This specimen falls within the usual diagnosis of *A. badius*, which, with the genus *Atractus* in general, is in need of detailed study.

### **Sibynomorphus mikanii fasciatus** Amaral

*Sibynomorphus mikanii fasciatus* Amaral, 1930, Bull. Antiv. Inst. Amer., 4: 28.

RIO GRANDE DO NORTE: Papery, 1 (49301).

*Remarks.*—Female; scale rows 15-15-13; ventrals 162, anal entire; caudals 48; upper labials 7; lower labials 7; oculars 0-2; temporals 1-2; total length 355; tail 60.

### **Pseudoboa guerini** Duméril and Bibron

*Rhinosimus guerini* Duméril and Bibron, 1854, Erp. Gén., 7: 991, pl. 72.

*Pseudoboa guerini* Amaral, 1929, Mem. Inst. Butan., 4: 40.

RIO GRANDE DO NORTE: Ceará Mirim, 1 (49338).

*Remarks.*—Scale rows 19-19-17; ventrals 211, anal entire; caudals 84; upper labials 8; lower labials 8; oculars 1-2; temporals 1-3; total length 356; tail 72.

### **Oxyrhopus trigeminus** Duméril and Bibron

*Oxyrhopus trigeminus* Duméril and Bibron, 1854, Erp. Gén., 7: 1013.

RIO GRANDE DO NORTE: Ceará Mirim, 1 (49330).

*Remarks.*—Female; scale rows 19–19–17; ventrals 194, anal entire; caudals 60; upper labials 8; lower labials 10; oculars 1–2; temporals 2–3; total length 338; tail 50; triads 2/3+15+2/3.

### ***Philodryas olfersii* Lichtenstein**

*Coluber olfersii* Lichtenstein, 1823, Verz. Doubl., p. 104.

*Philodryas olfersii* Boulenger, 1894, Cat. Sn. Brit. Mus., 3: 129.

PARAHYBA: Independencia, 1 (49314).

RIO GRANDE DO NORTE: Ceará Mirim, 7 (49329, 49331–33, 49337, 49346–47); Papery, 1 (49300).

| No.   | Sex | Scale rows | Vent. | Caud. | S.L. | I.L.  | Preoc. | Postoc. | Temp. | Total length | Tail |
|-------|-----|------------|-------|-------|------|-------|--------|---------|-------|--------------|------|
| 49331 | ♂   | 19–19–15   | 181   | 114   | 8/9  | 12    | 1      | 2       | 1½–1½ | 680          | 209  |
| 49337 | ♂   | 19–19–15   | 185   | 114   | 7    | 9/10  | 1      | 2       | 1–1   | 460          | 134  |
| 49332 | ♂   | 19–19–15   | 193   | 115   | 8    | 10    | 1      | 2       | 1–2   | 620          | 180  |
| 49347 | ♂   | 19–19–15   | 187   | 125   | 8    | 9     | 1      | 2       | 1–1   | 980          | 310  |
| 49300 | ♂   | 19–19–15   | 190   | 119   | 8    | 10    | 1      | 2       | 1–1   | 364          | 106  |
| 49329 | ♀   | 19–19–15   | 199   | 100+  | 8    | 10    | 1      | 2       | 1–2/1 | ...          | ...  |
| 49346 | ♀   | 19–19–15   | 197   | 108   | 8    | 10    | 1      | 2       | 1–1½  | 1185         | 332  |
| 49333 | ♀   | 19–19–15   | 198   | ...   | 8/7  | 10    | 1      | 2       | 1–2/1 | ...          | ...  |
| 49314 | ♀   | 19–19–15   | 196   | 106   | 8    | 10/11 | 1      | 2       | 1–1½  | 1160         | 308  |

Anal. divided.

*Remarks.*—The material at hand consists of formalin-preserved specimens in which coloration is entirely obscured. We are thus unable to offer an opinion as to geographical subdivision of this species.

### ***Philodryas nattereri* Steindachner**

*Philodryas nattereri* Steindachner, 1870, Sitzb. Akad. Wien, 62: 345, pl. 7, figs. 1–3.

CEARÁ: Quixada, 1 (49305).

RIO GRANDE DO NORTE: Baixa Verde, 1 (49318); Ceará Mirim, 4 (49323, 49351–52, 49354); Natal, 1 (49302).

| No.   | Sex | Scale rows | Vent. | Caud. | S.L. | I.L.  | Preoc. | Postoc. | Temp.   | Total length | Tail |
|-------|-----|------------|-------|-------|------|-------|--------|---------|---------|--------------|------|
| 49305 | ♂   | 21–21–16   | 209   | 131   | 8    | 11    | 1      | 2       | 2–2     | 1237         | 403  |
| 49318 | ♀   | 21–21–17   | 215   | 117   | 8/7  | 11/12 | 1      | 2       | 2–3/2–6 | ....         | ...  |
| 49351 | ♀   | 21         | ...   | 123   | 8    | 11    | 1      | 2       | 2–2     | ....         | ...  |
| 49323 | ♀   | 21         | 215   | ...   | 8    | 10/11 | 1      | 2       | 2–3     | ....         | ...  |
| 49352 | ♂   | 21–21–17   | 209   | 116   | 8    | 11    | 1      | 2       | 2–2     | 1055         | 313  |
| 49354 | ♂   | 21         | 209   | 130   | 8    | 11    | 1      | 2       | 2–3/3–4 | ....         | ...  |
| 49302 | ♂   | 21–21–15   | 210   | 138   | 8    | 11/12 | 1      | 2       | 2–2     | 461          | 141  |

Anal. invariably two.

**Oxybelis aeneus** Wagler

*Dryinus aeneus* Wagler, in Spix, 1824, Serp. Bras., p. 12, pl. 3.

*Oxybelis aeneus* Bogert and Oliver, 1945, Bull. Amer. Mus. Nat. Hist., 83: 382.

AMAZONAS: Manáos, 2 (49793–94).

RIO GRANDE DO NORTE: Ceará Mirim, 1 (49345).

| No.   | Sex | Scale rows | Vent. | Caud. | S.L. | I.L. | Preoc. | Postoc. | Temp. | Total length | Tail |
|-------|-----|------------|-------|-------|------|------|--------|---------|-------|--------------|------|
| 49345 | ♂   | 17–17–13   | 190   | 160   | 9    | 9/10 | 1      | 2       | 1–2   | 1517         | 586  |
| 49793 | ♀   | 17–17–13   | 199   | 156   | 9    | 10   | 1      | 2       | 1–2   | 1202         | 467  |
| 49794 | ♀   | 17–17–13   | 196   | 185   | 9    | 9/8  | 1      | 2       | 1–2   | 1339         | 542  |

Anal. invariably two.

*Remarks.*—Bogert and Oliver have satisfactorily clarified the nomenclatural problems involved in the designation of this species.

**Oxybelis argenteus** Daudin

*Coluber argenteus* Daudin, 1803, Hist. Nat. Rept., 6: 336.

*Oxybelis argenteus* Duméril and Bibron, 1854, Erp. Gén., 7: 815.

BRAZIL: Rio Madeira, 1 (49355).

*Remarks.*—Male; scale rows 17–17–15; ventrals 198, anal divided; caudals 185; upper labials 6; lower labials 8/7; oculars 1–2; temporals 1–2; total length 854; tail 431.

**Erythrolamprus aesculapii** Linnaeus

*Coluber aesculapii* Linnaeus, 1758, Syst. Nat., 10th ed., 1: 220.

*Erythrolamprus aesculapii* Duméril and Bibron, 1854, Erp. Gén., 7: 845.

BRAZIL: Rio Madeira, 1 (49357).

*Remarks.*—Female; scale rows 15–15–15; ventrals 179, anal divided; caudals 44; upper labials 7/8; lower labials 8; oculars 1–2; temporals 1–2; total length 264; tail 31; black rings on body  $\frac{1}{2} + 8 + \frac{1}{2}$ , on tail  $\frac{1}{2} + 2$ .

**Homalocranium melanocephalum** Linnaeus

*Coluber melanocephalum* Linnaeus, 1758, Syst. Nat., 10th ed., 1: 218.

*Homalocranium melanocephalum* Duméril and Bibron, 1854, Erp. Gén., 7: 859.

RIO GRANDE DO NORTE: Papery, 1 (49306).

*Remarks.*—Female; 15–15–15; ventrals 150, anal divided; caudals 26+ (tail broken); upper labials 7; lower labials 7; oculars 1–2; temporals 1–1; no loreal; length exclusive of tail 241.

## Elapidae

*Micrurus lemniscatus* Linnaeus

*Coluber lemniscatus* Linnaeus, 1758, Syst. Nat., 10th ed., 1: 224.

*Micrurus lemniscatus* Amaral, 1925, Proc. U. S. Nat. Mus., 67: 27.

RIO GRANDE DO NORTE: Papery, 1 (49297).

*Remarks.*—Amaral recognizes the form in northeastern Brazil as distinct, but subspecifically related to *lemniscatus*. Our specimen and two additional females (C.N.H.M.) collected by Rupert Wenzel at Recife agree in having ventrals more than 250 and caudals 30 or more, which takes them sharply out of the normal variation range of *ibiboboca*, in which both ventrals and caudals average distinctly lower than in Amazonian *lemniscatus*. The occurrence of three specimens with scale counts typical of *lemniscatus* within the presumed range of *ibiboboca* presents a problem requiring additional material and more accurate field notes for its solution. We have accordingly not followed Amaral (1944, p. 89) in his subspecific partition of this species.

## REFERENCES

## AMARAL, A. DO

1944. Notas sobre a ofiologia neotropica e Brasilica. XI. Subespecies de *Micrurus lemniscatus* (L.) e suas afinidades com *M. frontalis* (Dm. e Bibr.). Pap. Avulsos Dept. Zool., São Paulo, 5, pp. 83-94.

## BURT, C. E.

1931. A study of the teiid lizards of the genus *Cnemidophorus*, with special reference to their phylogenetic relationships. Bull. U. S. Nat. Mus., 154, pp. 1-286, figs. 1-38.

## DUNN, E. R.

1944. A revision of the Colombian snakes of the genera *Leimadophis*, *Lygophis*, *Liophis*, *Rhadinaea*, and *Pliocercus*, with a note on Colombian *Coniophanes*. Caldasia, 2, pp. 479-495.

## GOODE, J. P.

1943. Goode's school atlas. . . . Rev. ed. New York, Rand McNally. xvi+286 pp.

## LUTZ, ADOLPHO

1926. New species of Brazilian batrachians. Preliminary note. Trab. Inst. Oswaldo Cruz, 1926, pp. 1-16.

## MÜLLER, LORENZ

1927. Amphibien und Reptilien der Ausbeute Prof. Breslau's in Brasilien 1913-14. Abhandl. Senck. Naturf. Ges., 40, pp. 259-304.

## SANBORN, C. C.

- 1930a. Distribution and habits of the three-banded armadillo (*Tolypeutes*). Jour. Mamm., 11, pp. 61-68, pl. 4.  
1930b. Further notes on *Tolypeutes*. Jour. Mamm., 11, p. 504.



SCHMIDT, K. P.

1928. Notes on South American caimans. Field Mus. Nat. Hist., Zool. Ser.,  
12, pp. 205-231, pls. 16-21.
1936. Notes on Brazilian amphisbaenians. Herpetologica, 1, pp. 28-32, pl. 3.